

Agenda - Intelligent Systems Conference (IntelliSys) 2023

7-8 September 2023

TIME (AMSTERDAM) CEST/ UTC+2	Thu Sept 7	Fri Sept 8
08:30 AM - 09:00 AM	Delegates Check-in	Delegates Arrive
09:00 AM - 11:00 AM	Opening + Keynote Talks <ul style="list-style-type: none">• Bert de Vries (Eindhoven University of Technology)• Arne Hamann (Robert Bosch GmbH)• Efstratios Gavves (University of Amsterdam)	Day Opening + Keynote Talks <ul style="list-style-type: none">• Taco Cohen (Qualcomm AI Research)• Mehdi Dastani (Utrecht University)
11:00 AM - 11:30 AM	Networking + Posters	Networking
11:30 AM - 12:45 PM	Paper Presentations	Paper Presentations
12:45 PM - 01:30 PM	Lunch	Lunch
01:30 PM - 03:30 PM	Paper Presentations	Paper Presentations
03:30 PM - 03:45 PM	Break	Break
03:45 PM - 05:45 PM	Paper Presentations	Paper Presentations
05:45 PM Onwards	Tour of Amsterdam (In-person)	Closing Ceremony

IntelliSys 2023 | Day 1 - September 7, 2023

Session 1: Deep Learning

Sep 7 | 11:30 AM - 12:45 PM | De Dam

Session Chair: David Corliss

- 358 - Recommendation System over Multi-layer Complex Networks: A Wide and Deep Graph Convolutional Neural Network Approach (Maryam Amir Haeri)
- 265 - Active Restoration of Lost Audio Signals using Machine Learning and Latent Information (Abbas Cheddad)
- 2 - Adversarial Robustness of Multi-bit Convolutional Neural Networks (Lukas Frickenstein)
- 119 - Deep Learning Models for Inventory Decisions: A Comparative Analysis (Thais de Castro Moraes)
- 417 - Real-time Deep Learning for Leaks Detection and Demands Prediction of Compressed Medical Gas Systems (Gaoyong Luo)
- 73 - Application and Performance Improvement of Transfer Learning on ICBHI Lung Sound Dataset (Mohan Xu)

Session 2: Artificial Intelligence

Sep 7 | 11:30 AM - 12:45 PM | Amstelpark

Session Chair: Mermet Bruno

- 5 - Measuring Implicit Bias using SHAP Feature Importance and Fuzzy Cognitive Maps (Lisa Koutsoviti Koumeri)
- 311 - Pursuing the Optimal CP Model: A Batch Scheduling Case Study (Giacomo Da Col)
- 208 - Streamlining Conceptual Modeling (Hermann Bense)
- 86 - Ethical Concerns about Personhood, Responsibility, and Privacy in Active and Passive Brain-Computer Interfaces (Ronja Rönneback)
- 334 - Designing Cancellation Intervention System with Sliding Lead Times (Yong Seog Kim)
- 453 - Command Line Interface Risk Modeling (Anthony Faulds)

Session 3: Data Science

Sep 7 | 01:30 PM - 03:30 PM | De Dam

Session Chair: Maryam Amir Haeri

- 118 - Grouping Shapley Value Feature Importances of Random Forests for Explainable Yield Prediction (Florian Huber)
- 243 - Designing Against Bias: Identifying and Mitigating Bias in Machine Learning and AI (David J Corliss)
- 33 - Fuzzy Time Series Forecasting on the Example of the Dow Jones Index Dynamics (Ramin Rzayev)
- 19 - Mining Interesting Aggregate Tuples (Phan-Luong Viet)
- 400 - Explainable Prediction of Machine-tool Breakdowns based on Combination of Natural Language Processing and Classifiers (Maha Ben Ayed, Nouredine Zerhouni)
- 224 - Analyzing Apache Storm as Core for an Event Processing Network Model (Arne Koschel)
- 129 - Using Clustering Ensembles and Heuristic Search to Estimate the Number of Clusters in Datasets (Afees Odebode)
- 290 - Summarization of Feedback from Residents in Urban Area using the Unsupervised Method (Sofianita Mutalib)

Session 4: Robotics

Sep 7 | 01:30 PM - 03:30 PM | Amstelpark

Session Chair: Riyadh Mehdi

- 209 - Unmanned Ground Vehicle Navigation using Artificial Neural Networks (Tarek A. Tutunji)
- 427 - Benchmarking Off-the-shelf Human-aware Robot Navigation Solutions (Adam Gouguet)
- 287 - AI-driven Runtime Monitoring of Energy Consumption in Autonomous Delivery Drones (Moritz Urban)
- 295 - Two-Stage Object Detection for Autonomous Mobile Robot using Faster R-CNN (Syamimi Abdul Khalil)
- 106 - Real-World Applications of Artificial Intelligence in Architecture (J. Micah Prendergast)
- 91 - Improvement in the Mechanical Design of Mechatronic Devices with Therapeutic Operating Systems (Luis Serpa-Andrade)
- 45 - Continuous Action Recognition in Manufacturing Contexts by Deep Graph Convolutional Networks (Tiziana D'orazio)
- 92 - SPELTRA Focused on Therapies for Children with Special Educational Needs (Luis Serpa-Andrade)
- 20 - The Use of Fuzzy Controllers in Automatic Control Systems for Quadcopters (Ramin Rzayev)
- 27 - Multi 3D-Sensorbased Human-Robot Collaboration with Cloud Solution for Object Handover (Aulon Bajrami)

Session 5: Deep Learning Sep 7 03:45 PM - 05:45 PM De Dam Session Chair: Maryam Amir Haeri	Session 6: Data Science Sep 7 03:45 PM - 05:45 PM Amstelpark Session Chair: David Corliss
28- Pix2Pix Hyperparameter Optimisation Towards Ideal Universal Image Quality Index Score (Jan Stodt) 10 - E-ELPV: Extended ELPV Dataset for Accurate Solar Cells Defect Classification (Marco Grisanti) 238 - Boosting Federated Multitask Learning (Dániel Sándor) 315 - A Novel Deep Belief Neural Framework Based on Ant Colony to Analyze the Sentiment Score in Drug Review Dataset (Ibrahim Alsaduni) 128 - How Starting Points and Representations Affect Software Modularisation: An Empirical Analysis (Faisal Maramazi, Ashley Mann) 213 - Improved Technique for Dimensionality Reduction (Mateo Martinez) 239 - Interpolation and Prediction of Piezometric Multivariate Time Series based on Data Augmentation and Transformers (Nédra Mellouli) 171 - A Novel DNN-based IDS System Combined with an LR-GA Method to Detect Attacks (Trong-Minh Hoang) 371 - From Longitudinal Measurements to Image Classification: Application to Longitudinal MMRI in Alzheimer's Disease (Samaneh Abolpour Mofrad)	299 - Framing and BERTology (Parisa Safikhani, Hayastan Avetisyan) 66 - A System for Analyzing Human Capability at Scale using AI (Sanjiv Das) 15 - Predicting and Explaining Variations in Software Effort Estimation using Adaptive Fuzzy-Neural Networks with Clustering (Riyadh Al-khalidi) 101 - The Impact of Data Ingestion Layer in an Improved Lambda Architecture (Miguel Foko Sindjoug) 308 - Home Appliance Demand Forecasting (Diego Vallejo-Huanga) 74 - Using Natural Language Processing and Data Mining for Forecasting Consumer Spending through Social Media (Noha Mostafa) 444 - Explainable Dynamic Ensemble Framework for Classification Based on the Late Fusion of Heterogeneous Multimodal Data (Tamer Abuhmed) 307 - Performance of Machine Learning Classifiers for Malware Detection over Imbalanced Data (Paulina Morillo) 350 - A Data Protection Design for Online Exam Proctoring in Compliance with the Indonesian Personal Data (Sidik Prabowo)

IntelliSys 2023 | Day 2 - September 8, 2023

Session 7: Computer Vision Sep 8 11:30 AM - 12:45 PM De Dam Session Chair: Roberto Saia	Session 8: Artificial Intelligence Sep 8 11:30 AM - 12:45 PM Amstelpark Session Chair: David Corliss
298 - Low Cost Machine Vision for Insect Classification (Ingeborg E. Beckers) 30 - Image-Based Body Shape Estimation to Detect Malnutrition (Hezha H. MohammedKhan) 284 - TPDNet: A Tiny Pupil Detection Neural Network for Embedded Machine Learning Processor Arm Ethos-U55 (Gernot Fiala) 394 - An Unmanned System for Automatic Classification of Hazardous Wastes in Norway (Ibrahim A. Hameed) 11 - Wind Turbine Surface Damage Detection using YOLOv7 with Slicing Aided Hyper Inference (SAHI) (Oscar Best) 6 - Proving the Potential of Skeleton based Action Recognition to Automate the Analysis of Manual Processes (Marlin Berger) 100 - Unified Intersection over Union for Explainable Artificial Intelligence (Jan Stodt)	237 - Comparison of Artificial Neural Networks Algorithms on Datasets with Different Characteristics (Dijana Oreski) 186 - NP4G : Network Programming for Generalization (Shoichiro Hara) 263 - Production Portfolio Theory II - First Steps Towards a General Portfolio Theory and Numerical Exemplifications (Bernhard Heiden) 418 - Improving Neural Network using Jaya Algorithm with Opposite Learning for Air Quality Prediction (Iyad Abu Doush) 193 - How Variables Graphs May Help to Correct Erroneous MAS Specifications (Mermet Bruno) 304 - Shape Complexity Estimation using VAE (Andrew Melnik) 293 - Citation Recommendation employing Proximity-based Heterogeneous Network Embeddings (Zafar Ali)

Session 9: Computer Vision

Sep 8 | 01:30 PM - 03:30 PM | De Dam

Session Chair: Bernhard Heiden

- 353 - Targeted Image Reconstruction by Sampling Pre-trained Diffusion Model (Jiageng Zheng)
- 70 - Brain Waves combined with Evoked Potentials as Biometric Approach for User Identification: a Survey (Roberto Saia)
- 316 - Training System for the Tomato Paste Production Process through Virtual Environments (Fernando J. Pantusin)
- 140 - Analyzing VR/AR Technology Capabilities for Enhancing the Effectiveness of Learning Processes with Focus on Gamification (Nicklas Vorrink)
- 431 - Remote Learning of Mathematics for Visually Impaired Students During COVID-19 (Muhammad Shoaib)
- 220 - Robust Animal Tracking and Stereotypical Behavior Detection Under Real Environment using Temporal Averaging Background Subtraction (Ruqin Wang)
- 218 - Generalized Sidelobe Canceller based Antenna Array Beamformer with Reduced Computational Complexity (Cheng-Jie Wang)
- 103 - Lip Reading Filipino Words using Convolutional Neural Networks (Steven David A. Crespo, Reginald Neil Recario)
- 359 - Optimization of Lacrimal Aspect Ratio for Explainable Eye Blinking (Andrew Abel)

Session 10: Smart Healthcare

Sep 8 | 01:30 PM - 03:30 PM | Amstelpark

Session Chair: Kohei Arai

- 393 - Towards Explainability in Automated Medical Code Prediction from Clinical Records (Kanimozhi Uma)
- 187 - A First Experiment Towards Discomfort Assessment for Children with Cerebral Palsy Wearing an Exoskeleton (Andrea Vassilev)
- 31 - Algorithmic Fairness in Healthcare Data with Weighted Loss and Adversarial Learning (Pronaya Prosun Das)
- 231 - Bi-directional LSTM for Monitoring Biceps Brachii Muscle Activity of Healthy Subjects using sEMG Signals (Subhash Krishnamoorthy, Pournami Narayanan)
- 445 - Computer Vision-aided Diabetic Retinopathy Detection using Cloud-deployed Deep Learning Framework (Nimai Chand Das Adhikari)
- 437 - Exploring EEG Features for Differentiating Between Secure and Insecure Attachment Styles (Inon Zuckerman)
- 306 - SmartHealth: Artificial Intelligence for Lifelong Personalized Health Care (Joao Santos, Constantino Martins, Luiz Faria)
- 9 - Identification of Cotton Leaf Curl Disease using CNN and Vision Transformer (Goel Biju)
- 448 - Enhancing Medical Diagnosis Through Deep Learning and Machine Learning Approaches in Image Analysis (Ari Happonen)

Session 11: Ambient Intelligence

Sep 8 | 03:45 PM - 05:45 PM | De Dam

Session Chair: Mermet Bruno

- 291 - Development of Autonomous Vehicle Motion Planning and Control Algorithms with D* Planner and Model Predictive Control (Bo Chen)
- 242 - Active Risk Mitigation for Unmanned Aerial Systems (Andrew Kendall)
- 426 - A Viability Study of Pickup and Delivery Locations using Genetic Algorithm in Intelligent Transportation Systems (Angel Lopez Aguirre)
- 107 - Graph Autoencoder-Based Detection of Unseen False Data Injection Attacks in Smart Grids (Erchin Serpedin)
- 150 - From Industry 4.0 Toward Agriculture 4.0 (Bushara Hussein Ali)
- 122 - Advanced Methods for Anomaly Detection and Event Recognition by IoT Sensors Immersed in Heterogeneous and Evolving Environments (Redwane Ait Ouammi)
- 161 - An Integrated Wildfire Detection, Monitoring, Warning and Emergency Response System based on Unmanned Aerial Vehicles (Dimitra Tzanetou)
- 234 - Machine Learning based Intelligent Irrigation System using WSN (Benhamada Abdelhak, Kherarba Mohammed)

Session 12: Natural Language Processing

Sep 8 | 03:45 PM - 05:45 PM | Amstelpark

Session Chair: Noha Mostafa

- 215 - Estimating the Tendency of Social Media Users to Spread Fake News (Ahmad Hashemi)
- 253 - Towards Explainable AI: Relationship between Twitter Sentiment, User Behaviour, and Bitcoin Price Prediction (Rotimi Ogunakin)
- 214 - Evaluating the Effectiveness of Pre-trained Language Models in Predicting the Helpfulness of Online Product Reviews (Ali Boluki)
- 408 - Prompt-based Learning for Thread Structure Prediction in Cybersecurity Forums (Kazuaki Kashiara)
- 87 - Application of Language Models for the Segmentation of Website Visitors (Andreas Stöckl)
- 222 - A New Model for the Arabic Language Based on the Semantic Representation of Words and Sentences (Arafat A. Awajan)
- 416 - Part-of-Speech Tagging Accuracy for Manufacturing Process Documents and Knowledge (Fateme Besharati Moghaddam)